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Intellectual Property 2.0: Revisiting the Copyright and Trademark System for a Digital Reality

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INTELLECTUAL PROPERTY 2.0: REVISITING THE COPYRIGHT AND TRADEMARK SYSTEM FOR A DIGITAL REALITY

MARK METHENITIS[†]

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I. INTRODUCTION AND OVERVIEW

It has been an unfortunately overused theme, since at least the beginning of the internet age, to discuss intellectual property in the face of the changes in technology.¹ Instead of suggesting updates to the intellectual property system itself, most discussions deal only with the shortcomings of law with respect to technology or technological solutions to these shortcomings.² As a corollary, there has been no substantial legislative activity tailored to the specific issue of improving intellectual property for the new digital reality, or at least none that does more than address changes in technology.³ While there has been some discussion of updating our intellectual property scheme, the most important changes to the entertainment industry have been overlooked, despite their relevance to any analysis of contemporary intellectual property policy. While jurisprudence will always modify the law to accommodate new fact scenarios, we are overdue for legislative and regulatory efforts to address ongoing intellectual property issues. Not only would that be positive from a policy standpoint, but addressing such issues is part of the basic foundation of our separation of powers.⁴

The history of intellectual property law is well documented in countless books, articles, and other records, so it does not bear repeating here.⁵ The history of intellectual property has not been static, though changes to copyright and

¹See, e.g., Paul A. David, *The Digital Technology Boomerang: New Intellectual Property Rights Threaten Global "Open Science,"* (Oct. 12, 2000), <http://129.3.20.41/eps/dev/papers/0502/0502012.pdf>; Martha L. Arias, *Internet Law – Violation of Intellectual Property Rights on the Internet: For Digital Risks, Digital Solutions*, INTERNET BUS. L. SERVICES (Mar. 26, 2007), http://www.ibls.com/internet_law_news_portal_view.aspx?s=latestnews&id=1711.

²See, e.g., Eric Schlacter, *The Intellectual Property Renaissance in Cyberspace: Why Copyright Law Could be Unimportant on the Internet*, 12 BERKELEY TECH. L.J. 15 (1997); Malcolm Harbour & Simon Gentry, *Intellectual Property and the Challenge of Digital Technology*, EUROPEAN REV. POL. TECHS. (Dec. 2005), available at http://www.politech-institute.eu/review/articles/HARBOUR_Malcolm_&_GENTRY_Simon_volume_3.pdf (last visited Nov. 17, 2011).

³See, e.g., Adam C. Engst, *The Evil That is the DMCA*, TIDBITS (Nov. 18, 2002), <http://tidbits.com/article/6997> (discussing the Digital Millennium Copyright Act).

⁴For an explanation of separation of powers, see *Separation of Powers – An Overview*, NAT'L CONF. OF ST. LEGISLATURES (2011), <http://www.ncsl.org/default.aspx?tabid=13543> (last visited Nov. 17, 2011).

⁵See, e.g., MARK ROSE, *AUTHORS AND OWNERS: THE INVENTION OF COPYRIGHT* (1993); LYMAN RAY PATTERSON, *COPYRIGHT IN HISTORICAL PERSPECTIVE* (1968); Matt Dorn, *A Brief History of Intellectual Property*, WEBLOG.MATTDORN.COM (Jan. 19, 2007, 4:54 PM), <http://weblog.mattdorn.com/content/a-brief-history-of-intellectual-property/>.

trademark law have not been as recent as changes in the patent realm.⁶ The important component is that, at a historical and a practical level, the objective of intellectual property law is to balance the rights of producers and consumers such that the market is mutually beneficial.⁷ If the system favors producers to the detriment of consumers, then media is consumed in smaller amounts. If the system favors consumers to the detriment of producers, then media is produced in smaller amounts. Under either scenario, everyone loses. Smaller media consumption or production means both reduced revenue for producers (via piracy without protection, or via reduced consumer demand when regulations are too overbearing) and less media for the public because of the disincentive to produce. Less revenue means fewer jobs, and less media consumption means less advancement in media. The balance between rights is key to both the growth of media itself as well as the advancement of society.⁸

This balancing act was inherently simpler prior to the creation of digital media. When new technology came along, no matter how advanced it was at the time, the consumer's ability to copy the producer's media always had one notable limitation: subsequent copies suffered degradation in quality.⁹ Without the ability to create copies with no quality loss, the barriers to market entry were simply too high for it to be practical to the average consumer.¹⁰ Digital media, on the other hand, can be copied without loss of quality by anyone with a basic grasp of the

⁶ The America Invents Act of 2011 has been the most recent substantial change to the patent system. Leahy-Smith America Invents Act of 2011, Pub. L. No. 112-29, 125 Stat. 284 (2011). The 1999 Anti-Cybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d) (2006), is the most recent change to the United States trademark laws related to technology, and the 1998 Digital Millennium Copyright Act, 17 U.S.C. §§ 512, 1201–1205, 1301–1332; 28 U.S.C. § 4001 (2006), is the most recent change to the United States copyright law related to technology.

⁷ See *Intellectual Property: Protection and Enforcement*, WORLD TRADE ORG., http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm (last visited Dec. 4, 2011); Daniel Cohen & Roy Rosenzweig, *Digital History: A Guide to Gathering, Preserving, and Presenting the Past on the Web*, CENTER FOR HIST. & NEW MEDIA, <http://chnm.gmu.edu/digitalhistory/copyright/> (last visited Dec. 4, 2011).

⁸ As set forth in the Article I, Section 8 of the United States Constitution, Congress has the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” U.S. CONST. art. I, § 8, cl. 8.

⁹ See Matthew W. Bower, Note, *Replaying the Betamax Case for the New Digital VCRs: Introducing TiVo to Fair Use*, 20 CARDOZO ARTS & ENT. L.J. 417, 439 (2002) (“In the case of movie renting and buying, even in 1984, many realized that taping movies off the television was a poor substitute for watching an authorized commercial copy.” (citing Michael C. Diedring, *VCR Home Recording and Title 17: Does Congress Have the Answer to Sony Corp. of America v. Universal City Studios, Inc.*?, 35 SYRACUSE L. REV. 793, 816 (1984))).

¹⁰ See Bower, *supra* note 9, at 439 (“[T]he quality of a retail copy cannot be compared with the version recorded off the air using a VCR.”).

“copy” and “paste” functions on a modern computer.¹¹ This alone is not necessarily problematic; copies still have to be distributed and there is a practical limit to what can be distributed.¹² Moreover, at its inception, digital storage media was still quite expensive.¹³ The Internet, coupled with the dramatic decrease in the cost of storage, has changed those concerns. In fact, it may actually be easier to distribute content illegally than it is to legitimately publish content through other channels.¹⁴

Much in the same manner that traditional intellectual property law was designed for a world that was not driven by digital media, traditional intellectual property law does not completely address, in a thorough or efficient manner, the idea of the entertainment franchise, that is, the series and sequel driven entertainment market that exists today. This is the first time in history where it has become common for an entertainment property to be planned not only with tie-ins to other media but also to be played out as a series and a brand rather than to simply tell a story. While the series concept dates back to some novels,¹⁵ early comics,¹⁶ and radio serials,¹⁷ and while much of this methodology has been driven by the overwhelming trend in sequels in the movie industry over the past forty years, it has spread in a substantial fashion to the games industry.¹⁸

Of course, there is the classical debate as to whether these issues should be resolved through legislation or through the private sector.¹⁹ While this piece will endeavor to examine both legislative and private sector resolutions in the context of a few examples, it is wholly impractical to believe that any solution could be

¹¹ GIOVANNA FOSSATI, FROM GRAIN TO PIXEL: THE ARCHIVAL LIFE OF FILM IN TRANSITION 122 (2010).

¹² See, e.g., Gordon Haff, *Digital Distribution Isn't Free*, CNET NEWS (Dec. 6, 2007, 6:06 AM), http://news.cnet.com/8301-13556_3-9829862-61.html (disagreeing with the proposition that “[t]he cost of digital distribution is close to zero.”).

¹³ Matthew Komorowski, *A History of Storage Cost*, MKOMO.COM, <http://www.mkomo.com/cost-per-gigabyte> (last visited Dec. 4, 2011).

¹⁴ See Haff, *supra* note 12.

¹⁵ For example, many of the episodic works of Charles Dickens, *One Thousand and One Nights*, or series like *Nancy Drew* or *The Hardy Boys*.

¹⁶ For example, newspaper series comics like *Peanuts* or *Calvin and Hobbes* or comic books series, from *Action Comics* to *The Uncanny X-Men*.

¹⁷ For example, *Dick Tracy*, *Captain Midnight*, or *The Cisco Kid*.

¹⁸ See Jennifer M. Proffitt et al., *Plugging Back into The Matrix: The Intertextual Flow of Corporate Media Commodities*, 31 J. COMM. INQUIRY 239, 242 (2007), available at <http://www.personal.psu.edu/faculty/m/p/mpm15/ProffittMatrix.pdf> (“The goal is to move fans from the original ‘text’ to other texts such as narratively connected video games, Web sites, and DVD releases that do not just duplicate the original text but ‘advance’ it.”).

¹⁹ See, e.g., Lyle A. Brecht, *The Private Sector Versus Government: Which is Better?* (Sept. 3, 2009) (unpublished manuscript) (on file at <http://www.scribd.com/doc/12548397/Private-Sector-Versus-Government-Which-is-Better>).

driven completely without government intervention. Even the often maligned Digital Millennium Copyright Act²⁰ has proven to be one of the few tools available to those trying to protect their works as there is often simply no substitute for a real cause of action or regulatory framework.²¹ Ultimately, though, the government response needs to be one flexible enough to anticipate ongoing changes in technology. While it is likely impossible to craft legislation that could withstand all new technological steps forward, it would be prudent to craft something that would at least operate in a workable fashion until the next advance in technology.

II. SHIFT IN ENTERTAINMENT DEVELOPMENT METHODOLOGY

Change has not been limited to the means for delivering media. In fact, one of the most notable changes relates to media creation in general. The derivative work²² has long been a staple of copyright legal theory, litigation, and legislation. Derivative works, however, have substantially evolved over the past few decades. For example, while sequels and even serials or series works are not new, today's media industry has substantially expanded this concept.²³ It is common in today's media for the first work to contemplate a series, rather than a series resulting from the success of the first work. This has presented itself in two ways that have become more unique to modern media and particularly ubiquitous compared to historical media: a shift to entertainment conglomerates and a shift to embracing an archetypal sequel. The remainder of this section discusses the intellectual property issues related to these shifts.

A. *Shift to Entertainment Conglomerates*

First, the entertainment conglomerate represents a large group where the characters and the associated brand have become synonymous. The Walt Disney Company is probably one of the best examples of this, especially using Mickey

²⁰ Digital Millennium Copyright Act, *supra* note 6; see also Fred Von Lohmann, *Unintended Consequences: Twelve Years Under the DMCA*, ELECTRONIC FRONTIER FOUND. (Feb. 2010), <https://www.eff.org/files/eff-unintended-consequences-12-years.pdf>.

²¹ See, e.g., MDY Indus., LLC v. Blizzard Entm't, Inc., 629 F.3d 928, 945 (9th Cir. 2010) (reading DMCA "§ 1201(b)(1)'s language—'right of a copyright owner under this title'—to reinforce copyright owners' traditional exclusive rights under § 106 by granting them an additional cause of action against those who traffic in circumventing devices that facilitate infringement.").

²² See 17 U.S.C. § 101 (2006) ("A 'derivative work' is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted.").

²³ See Proffitt et al., *supra* note 18, and accompanying text.

Mouse as an example.²⁴ The character is as much the brand as it is a portion of any of the works in question. In the gaming world, the “mascot” concept is very similar, although only Mario and possibly Donkey Kong, Link, and/or Samus have reached the same level in their relation to Nintendo as Mickey’s relation to Disney.²⁵ This is important in one major respect. Consumers readily relate these existing copyrighted properties to the companies who created them, making the work function, in many respects, like a trademark, but without trademark protection.²⁶ In essence, by the producer acting to protect their rights, they are to some degree protecting the consumer as well, because misuse of these characters or their associated works could cause confusion among consumers. This activity blurs the traditional line between copyright,²⁷ which protects the expression containing these characters, and trademark,²⁸ which would protect the goodwill and reputation associated with the character as a brand icon.

B. Shift to Embracing the Archetypal Sequel

The second shift is what I will call the “archetypal sequel,” something that has become a major component of the video game industry. In these games, unlike traditional sequential stories, the storyline may be wholly disconnected or only loosely related—though similar game mechanics, characters, or other components under the same trade name may be reused. There is a wide spectrum, from games like *Call of Duty* and *Battlefield* to games like *The Legend of Zelda*²⁹ or the platformers in the Mario universe. In many of these games, certain elements from the copyrighted work may become synonymous with the brand itself. Mario is

²⁴ See LOUISE KRASNIEWICZ, WALT DISNEY: A BIOGRAPHY 43 (2010) (the Sonny Bono Copyright Term Extension Act, “also known as the Mickey Mouse Protection Act,” “extended the copyright protection of Mickey Mouse, a protection that was about to lapse.”).

²⁵ See, e.g., *Nintendo’s Shining Star*, GAMECUBICLE.COM, http://www.gamecubicle.com/features-mario-nintendo_shining_star.htm (last visited Dec. 4, 2011); DAVID SHEFF, GAME OVER: HOW NINTENDO ZAPPED AN AMERICAN INDUSTRY, CAPTURED YOUR DOLLARS AND ENSLAVED YOUR CHILDREN (1993).

²⁶ Arguably, there might be common law protection here, but the distinction in question is one between registered copyrights and registered trademarks.

²⁷ See 17 U.S.C. §§ 101–1332 (2006); see also *Copyright Basics*, COPYRIGHT CLEARANCE CENTER, <http://www.copyright.com/viewPage.do?pageCode=cr10-n> (last visited Dec. 4, 2011).

²⁸ See 15 U.S.C. §§ 1051–1129 (2006); see also *Overview of Trademark Law*, BERKMAN CENTER FOR INTERNET & SOC’Y, <http://cyber.law.harvard.edu/metaschool/fisher/domain/tm.htm#1> (last visited Dec. 4, 2011).

²⁹ Though there is supposedly a direct connection between the *Zelda* titles, the timeline is so complex that it is lost on the average fan. Unless a player has taken the time to thoroughly research the timeline, it would appear to fit this model well. For more information on the *Zelda* timeline, see *Legend of Zelda Retrospective*, GAMETRAILERS.COM, <http://www.gametrailers.com/retrospective/?rdir=1#Legend%20of%20Zelda> (last visited Dec. 4, 2011); *Timeline*, ZELDAPEDIA, <http://zelda.wikia.com/wiki/Timeline> (last visited Dec. 4, 2011).

probably one of the best examples where not only does he have an archetypal sequel series in his platform games but he also is a part of the brand for a whole series of spinoff games, including *Mario Party*, *Mario Tennis*, and *Mario Kart*.³⁰ All of the *Mario* games share certain elements that would be readily recognizable to those familiar with the series, from the cast of characters (Mario, Luigi, Princess Peach, Bowser, etc.) and items (the invincibility star, the mushroom, the turtle shell, etc.) to settings and storyline themes.

The use of “archetypal sequels” has spawned its own set of problems. It would seem that every time certain critical properties near the end of their copyright protection the duration of copyright is extended.³¹ Copyright is limited in its duration, either based on a static timeline for corporate copyrights, or a floating timeline based on the author’s date of death plus seventy years.³² This creates two problems. First, the growth of the public domain has stagnated, as works are protected for longer and longer durations. This problem also has the unfortunate side effect of exacerbating the orphan works issue, because there is a greater likelihood that the owner of the work will be lost to the ravages of time.³³ Second, it has created a situation where the copyright life of a few, albeit important, works are dictating the length of copyright for a substantially greater number of works.³⁴ Copyright cannot continue to be extended indefinitely; that would be an anathema to the underlying policy considerations of the copyright system and would also be unconstitutional.³⁵

This gives rise to a simple question: Does our contemporary intellectual property system have a means to adequately address the situation of Mario or Mickey Mouse nearing the end of their copyright protection? In my mind, the answer is unequivocally no, and the solution seems relatively obvious. A new intellectual property type needs to be created with elements from both copyright and trademark that addresses these few—but economically significant—

³⁰ See, e.g., Rus McLaughlin, *IGN Presents: The History of Super Mario Bros.*, IGN (Sept. 13, 2010), <http://retro.ign.com/articles/833/833615p1.html>.

³¹ Mike Masnick, *Copyright Length and the Life of Mickey Mouse*, TECHDIRT (Aug. 11, 2009, 10:57 AM), <http://www.techdirt.com/articles/20090811/0123105835.shtml>; see also KRASNIEWICZ, *supra* note 24, and accompanying text.

³² 17 U.S.C. § 302(a) (2006) (“Copyright in a work created on or after January 1, 1978, subsists from its creation and, except as provided by the following subsections, endures for a term consisting of the life of the author and 70 years after the author’s death.”).

³³ Orphan works are those works whose authors cannot be located or are unknown. For a thorough discussion of the problems that orphan works introduce to the copyright ecosystem, see James Boyle, *Orphan Works: Analysis and Proposal*, CENTER FOR THE STUDY OF THE PUB. DOMAIN (Mar. 2005), <http://www.law.duke.edu/cspd/orphanworks.html>.

³⁴ See Masnick, *supra* note 31.

³⁵ See *supra* note 8 and accompanying text.

situations. This type of intellectual property should be made such that copyright extensions do not continue to be the norm but also allow the more unique situations to be more adequately addressed. I have written on this theory in the past, and for lack of a better term, I will call the new intellectual property “copymark.”³⁶

The idea behind a copymark is to create a defined field of overlap between existing copyright and trademark where a separate set of rules can apply such that, in particular, the existing expiration of copyrights is not affected. While there are certainly many potential approaches to such a system, I think the most practical is to have the works at issue collected into a copymark within some number of years from the expiration of their respective copyright. Those works would then be tied to an existing trademark, or marks, such that their expiration would be deferred to the expiration of the respective trademark. The issue here is that the work itself has equal, if not greater, value for its brand identification, and that it become impossible to separate the two. To qualify, there would have to be some level of similarity between the copyrighted works and the trademarks in question. There would obviously be a substantial amount to define with respect to how copymarks work. As an example, the copyrights and trademarks in the Mario and Mickey properties could be bundled into their own respective copymarks.

While the possibility of an additional conditional extension of copyright might be objectionable to some, this extended right would have to be coupled with a continued use. Abandonment of the character would terminate all of the associated protections, as would other typical ends to trademark protection, such as voluntary termination or genericide, to the extent that this is even possible through failure to assert infringement claims. In fact, tying the termination of the copymark to the more traditional trademark elements could actually result in the work moving to the public domain sooner, provided that the grant of a copymark eliminates the copyright protection to the work, which may counterbalance the potential extension and make the copymark idea more palatable under the Constitution. The overwhelming majority of games and game icons fall by the wayside well before copyright protection would have expired. For every Mario, Link, or Sonic the Hedgehog, there are dozens of titles and characters (like Bubsy the Bobcat, Crash Bandicoot, Glover, or Impossimole) that fail to have staying power.³⁷ For titles like these, they may either never achieve copymark, or,

³⁶ See Mark Methenitis, *Intellectual Property 2.0: Convergence of Copyright and Trademark*, L. OF THE GAME (May 14, 2009, 10:44 AM), <http://lawofthegame.blogspot.com/2009/04/intellectual-property-20-convergence-of.html>.

³⁷ See, e.g., Stephen Kelley, *VGC Top Ten: Failed Gaming Mascots*, VGCHARTZ (Apr. 4, 2010), <http://gamrfeed.vgchartz.com/story/7668/vgc-top-ten-failed-gaming-mascots/>; Joseph

depending on how it is structured, fall into the public domain sooner due to lapse in continued use. These are technical details that would have to be resolved in the creation of any copymark statute. Also requiring that the trademark be at least five years old could further solidify the filing and would match the five year requirement for a § 15 Declaration of Incontestability under the Lanham Act.³⁸ Whether a § 15 declaration would be a prerequisite for copymark filing would likely be the subject of some debate, but it seems sensible that the filings could, and likely should, be linked to one another. Similarly, the five year standard imposed for prima facie evidence of distinctiveness would also connect nicely to the five year requirement for copymark.³⁹

Under a copymark regime, the essential idea is that a copymark needs to be earned, rather than simply applied for. Similar to some of the other ideas in trademark, like § 15 Declaration of Incontestability or acquired distinctiveness under 15 U.S.C. § 1052(f), the copymark would have prerequisites that would require time to vest. While famousness is less defined a standard, it prevents everyone with a copyright and a trademark that share similar subject matter from immediately trying to benefit from the copymark status. Copymark has a limited usefulness, and accordingly should be applied in a limited manner.

As with any new field of intellectual property, much would still need to be resolved to bring this theory into practice. In all likelihood, the same fair use exemptions would apply to other works that might make some use of the subject of the copymark. Thus, some discussion would be necessary as to the interplay between fair use in a copyright context and fair use in a trademark context.⁴⁰ Fair uses, like education, parody, comment, criticism, and news reporting, would be

Luster, *Top 10 Most Pathetic Video Game Mascots*, CRUNCHYROLL (July 28, 2011, 1:30 PM), <http://www.crunchyroll.com/anime-feature/2011/07/28/top-10-most-pathetic-video-game-mascots>.

³⁸ 15 U.S.C. § 1065 (2006) (A mark “in continuous use for five consecutive years subsequent to the date of such registration and is still in use in commerce, shall be incontestable”); see also *Declaration of Incontestability of a Mark Under Section 15*, USPTO.GOV, <http://www.uspto.gov/trademarks/process/maintain/prfaq.jsp#heading-5> (last visited Dec. 4, 2011).

³⁹ 15 U.S.C. § 1052(f) (2006) (“The Director may accept as prima facie evidence that the mark has become distinctive, as used on or in connection with the applicant's goods in commerce, proof of substantially exclusive and continuous use thereof as a mark by the applicant in commerce for the five years before the date on which the claim of distinctiveness is made.”).

⁴⁰ Fair use is a defense to infringement that allows certain uses in limited circumstances. For a complete discussion of fair use in copyright law, see RICHARD STIM, *GETTING PERMISSION: HOW TO LICENSE & CLEAR COPYRIGHTED MATERIALS ONLINE AND OFF* (4th ed. 2010). For a complete discussion of fair use as it applies to trademark law, see *Overview of Trademark Law*, *supra* note 28.

relatively essential to maintain.⁴¹ Similarly, with famousness being a prerequisite to copymark filing, dilution would be a more straightforward assessment than under traditional trademark doctrine—foregoing the usual discussion of famousness and moving directly to the effect on the mark. It would seem the small handful of companies to whom this would directly apply would be immediately interested in having a long term solution presented rather than having to renew lobbying efforts every time their copyrights near expiration.

III. THE PROBLEM WITH SOFTWARE AND COPYRIGHT

While the continuing evolution to the manner of entertainment production and the peculiar overlap between copyright and trademark present a fairly universal area for improved efficiency across many industries, there is another more fundamental problem with software: the copyright protection of different aspects of software implicates different policy concerns and affects the public domain in different ways. Yet the duration of a copyright is universal in all instances. It therefore becomes prudent to discuss why different durations may better promote the progress of science and are therefore more congruent with the policy considerations that drive copyright as well as the Constitutional basis for copyright protections. Software itself has provided a unique situation in copyright, with music being the closest analogous work. Specifically, the software can be copyrighted twice: as source code and as a finished audiovisual work.⁴² Similarly, music can be copyrighted as sheet music or an actual performance.⁴³ The problem is that, simply put, software is not music, and despite the similarities between the two, they should not be treated identically.

It has been articulated by many why the difference exists,⁴⁴ but it bears repeating. When a musician plays sheet music, interpretation is given to the music on the page. Even two musicians told to play the simplest sheet music as precisely as possible will still not sound identical. Sheet music interpreted digitally, through MIDI for example, may have identical results, but that is still not going to the root of what the composer was trying to put to paper. Software, on the other hand, reduced to binary code is one thing and one thing only. While some may point to the different results different compilers may leave from the

⁴¹ Examples of fair use include but are not limited to “criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research . . .” 17 U.S.C. § 107 (2006).

⁴² See *Copyright Registration for Computer Programs*, UNITED STATES COPYRIGHT OFF. (May 2011), <http://www.copyright.gov/circs/circ61.pdf>.

⁴³ See *id.*

⁴⁴ See, e.g., John D. Cook, *Sheet Music, DNA, and Source Code*, THE ENDEAVOUR BLOG (May 23, 2011), <http://www.johndcook.com/blog/2011/05/23/sheet-music-dna-and-source-code/>.

same code,⁴⁵ the end result is supposed to be the same. For example, HTML rendering differences between Internet Explorer and Firefox are not the result of interpreting the code differently, like a musician might; they are the result of one program reading the code correctly and the other reading it incorrectly.⁴⁶

There is also a broader issue at play here. While the theoretical possibilities of source code and music are both endless, the practical implication is that the life of some code elements is much, much shorter than the lifespan of musical elements, yet both are given the same duration of protection. Software code becomes obsolete at a fairly rapid pace, as most people can observe from the speed at which new versions of their favorite programs are released.⁴⁷ There are innumerable examples of this, from the speed at which practically every piece of mainstream software becomes outdated to the more obvious examples of the yearly updates of sports games in the video game industry, including the well-known franchises such as Madden and NCAA Football.⁴⁸ Sheet music, on the other hand, never reaches obsolescence, although its market value may change over time as the public's tastes change. The question, then, is what benefit are we, either producers or consumers, gaining in protecting the code as a distinct element for as long as the final compiled program? There is a distinct possibility that this is counterproductive to progress.

Take the original *Super Mario Brothers*, for example. The final game, as contained on the cartridge, is protected by copyright.⁴⁹ What would be the comparative harm if the copyright to the source code expired sooner? The

⁴⁵ See, e.g., *Why Do Different C++ Compilers Give Different Results For This Code?*, STACKOVERFLOW, <http://stackoverflow.com/questions/5158014/why-do-different-c-compilers-give-different-results-for-this-code> (last visited Dec. 4, 2011).

⁴⁶ See, e.g., *Ten Things That Look Wrong in Internet Explorer*, ADAM'S TECH BLOG, <http://www.lamintak.com/blog/2009/03/whats-wrong-with-internet-explorer.html> (last visited Dec. 4, 2011).

⁴⁷ See, e.g., Michael Froomkin, *Annals of Software Obsolescence: Intuit is Even More Evil Than I Thought*, DISCOURSE.NET (May 31, 2004), http://www.discourse.net/2004/05/annals_of_software_obsolescence_intuit_is_even_more_evil_than_i_thought.html; Paul Thurrott, *Thinking About Software Obsolescence*, WINDOWS IT PRO (Jul. 25, 2000, 12:00 AM), <http://www.windowsitpro.com/article/training-and-certification2/thinking-about-software-obsolescence>.

⁴⁸ See, e.g., Cody Gilley, *Annual Releases in Video Games: Does it Work?*, GAMEINFORMER (July 30, 2011, 5:46 PM), http://www.gameinformer.com/blogs/members/b/codygilleymcnugget_blog/archive/2011/07/30/early-releases-in-video-games-does-it-work.aspx.

⁴⁹ The work is copyrighted from its release date in 1985. See Carol S. Curme, Case Note, *Derivative Works of Video Game Displays: Lewis Galoob Toys, Inc. v. Nintendo of Am. Inc.*, 964 F.2d 965 (9th Cir. 1992), 61 U. CIN. L. REV. 999, 1005 (1993) ("To accommodate the rapid growth in the computer industry, Congress declared the copyrightability of computer programs in a 1980 Amendment to the Copyright Act.").

original game could not be copied completely as that would be an infringement of the copyright to the finished product. At 25 years from release, the original game's code is unlikely to create a competitive advantage today; it certainly would not create a competitive advantage if we limited it to half of the normal length of copyright.⁵⁰ It seems unlikely that such a radical departure from existing copyright would ever find its way to statute, but allowing the code to move to the public domain before the entire work transitions to the public domain would potentially serve to promote the development of software. Those learning to program would have access to huge code libraries to learn from, and others could then make use of this public domain code to improve on their own software. Considering the rate of technological progress, however, it would seem that the length of copyright protection for source code would be one element of current copyright that could be revisited. It could potentially be shortened to a term between the length of a copyright and a patent.

IV. OPEN SOURCE AND THE LIBRARY OF CONGRESS

The copyright paradigm that exists with source code, as described above, has been viewed, at least by some, as outdated. Open source, as a movement, runs to a great degree contrary to the established copyright paradigm for source code and may provide an interesting source of inspiration for greater progress in software development. The open source movement may similarly benefit from some of the more traditional elements of the copyright system by taking advantage of available, but perhaps underutilized, resources like the Library of Congress. The Library of Congress has stood since 1800 as the repository for a massive collection of information "to further the progress of knowledge and creativity for the benefit of the American people."⁵¹ Over the years, the Library has done a commendable job in this task, and its tie to the United States' copyright system has helped further this mission.⁵² Moreover, compared to other government institutions, the Library has done a laudable job adapting to new media for their incorporation into the Library's collection.⁵³ There is an area, however, where the Library could be instrumental in making a giant leap forward in our progress in software development: open source.

⁵⁰ The normal length would vary by the creator of the work, but would be substantially longer than 25 years in any case. See *How Long Does Copyright Protection Last?*, UNITED STATES COPYRIGHT OFF. (Mar. 10, 2010), <http://www.copyright.gov/help/faq/faq-duration.html>.

⁵¹ *Mission*, LIBR. OF CONGRESS, <http://www.loc.gov/about/mission.html> (last visited Dec. 4, 2011).

⁵² The Library of Congress receives the mandatory deposits from copyright registrations. See *Mandatory Deposit*, UNITED STATES COPYRIGHT OFF. (Jan. 24, 2011), http://www.copyright.gov/help/faq/mandatory_deposit.html.

⁵³ See, e.g., *Online Audio Collections and Presentations*, LIBR. OF CONGRESS (Sept. 13, 2011), <http://www.loc.gov/rr/record/onlinecollections.html>.

Open source is in some respects a development methodology and in others a philosophy. The idea is one of openness in development, and as it applies to software, where the source code is released publically.⁵⁴ Open source software has become a major movement,⁵⁵ especially since the advent of the Internet. In fact, one of the most successful open source projects,⁵⁶ Mozilla Firefox, is a web browser.⁵⁷ Other open source projects cover almost all areas of software development, from operating systems⁵⁸ to productivity suites⁵⁹ to games.⁶⁰

The Library, to be fair, is certainly aware of how open source works and, to that end, has actually moved to an open source model for internal development.⁶¹ However, there is a greater potential here that remains untapped. Our current open source system is one rooted in traditional copyright to the source code.⁶² That is, the code is released under a license to whomever wants to use it within the parameters set by the license.⁶³ However, the system is still built on a copyright foundation, which is a fundamental flaw. Rather, it would be far more efficient to create a parallel open source registry maintained by the Library of Congress. There would be no confusion over licenses, no complex intersection with copyright, and a simple set of established rules governing the work. In short, the system would vastly simplify the ability to make use of open source projects in other ways and by other people, something that is a difficult task to deal with contractually in the current environment. More importantly—to the mission of

⁵⁴ See David Wheeler, *Open Source Software / Free Software (OSS/FS) References*, DWHEELER.COM, http://www.dwheeler.com/oss_fs_refs.html (last visited Feb. 12, 2012) (providing a list of open source software projects).

⁵⁵ *Open Source Definition*, OPEN SOURCE INITIATIVE, <http://www.opensource.org/docs/osd> (last visited Dec. 1, 2011).

⁵⁶ *The 8 Most Successful Open Source Products Ever*, PINGDOM (May 29, 2009), <http://royal.pingdom.com/2009/05/29/the-8-most-successful-open-source-products-ever>.

⁵⁷ MOZILLA FIREFOX, <http://www.mozilla.org/en-US/firefox/new> (last visited Dec. 1, 2011).

⁵⁸ See Wheeler, *supra* note 54.

⁵⁹ OPENOFFICE.ORG, <http://www.openoffice.org> (last visited Dec. 1, 2011).

⁶⁰ See Tim Brookes, *8 Awesome Free Open Source Games You Can Enjoy on Windows, Mac and Linux*, MAKEUSEOF (Oct. 25, 2010), <http://www.makeuseof.com/tag/8-awesome-free-opensource-games-enjoy-windows-mac-linux>; *70 of the Best Free and Open Source Games for Download*, RED FERRET (Mar. 2, 2010), <http://www.redferret.net/?p=19113>; Peter Sbarski, *Top 5 Best (Free) Open Source Games*, APC (Jan. 21, 2008, 12:49 AM), http://apcmag.com/top_5_best_free_open_source_games.htm; OPEN SOURCE GAMER, <http://fossgamer.110mb.com> (last visited Dec. 1, 2011).

⁶¹ *Library Explores Ways to Release Open Source Software*, LIBR. OF CONGRESS (Jan. 14, 2010), http://www.digitalpreservation.gov/news/2010/20100114news_article_open_source.html.

⁶² See Wheeler, *supra* note 54 (providing a basic overview of open source software).

⁶³ There are many different open source license models, some of which are specific to the project and others are commonly used by multiple developers. See *Open Source Licenses*, OPEN SOURCE INITIATIVE, <http://www.opensource.org/licenses> (last visited Dec. 1 2011) (listing open source licenses by name and category).

the Library—the Library would now become a substantial code repository, which would further as a public service to promote the “progress of knowledge” in software. Like any other major change to our intellectual property system, there would be substantial legal hurdles to overcome, largely on the legislative side, in creating this system.⁶⁴ But implementing a system with some easy to understand options,⁶⁵ along the lines of the Creative Commons license,⁶⁶ which could be integrated into the open source portion of the Library and its e-filing system would be a major step forward, combining the best elements of the progress of both the public⁶⁷ and private sector⁶⁸ in this regard. It would also resolve issues with orphaned open source projects as a preventative measure in that the repository itself would be able to answer questions about the creator of the project and what parameters have been allowed with respect to its use. Works could also automatically move to the public domain at the end of their life. Being truly forward thinking, there could even be integration tools with other software development sites like SourceForge.⁶⁹ The Library of Congress has long stood for the lofty goal of making the United States one of the top literary, artistic, and scientific communities, and this open source repository would drive progress in software development.

V. PROBLEM OF SOFTWARE WORKS FOR HIRE

The previous sections discussed problems that exist with works as a whole, once they are complete and copyrightable. There are, however, also challenges that present prior to the completion of a work. Much in the way the software itself has posed some unique intellectual property concerns, the manner of production is becoming far muddier from a works for hire perspective.⁷⁰ It is beyond the scope of this article to discuss the issue of employment in the industry or the business and personal concerns in the employee versus independent

⁶⁴ See Jon Stokes, *Open Source Legislation and Digital Civil Rights*, ARS TECHNICA (Aug. 6, 2007, 11:08 PM), <http://arstechnica.com/tech-policy/news/2007/08/open-source-legislation-and-digital-civil-rights.ars> (discussing the intersection of legislation and technology).

⁶⁵ Options might include public domain release, an attribution requirement, or a requirement that projects integrating the work also be made available on this open source system.

⁶⁶ CREATIVE COMMONS, <http://creativecommons.org> (last visited Dec. 1, 2011).

⁶⁷ See ELECTRONIC COPYRIGHT OFF., <http://www.copyright.gov/eco> (last visited Dec. 1, 2011) (presenting information about the online filing system for the United States Copyright Office).

⁶⁸ See CREATIVE COMMONS, *supra* note 66 (describing an online system for allowing alternative rights to traditional copyright that is simple to understand); SOURCEFORGE, <http://sourceforge.net> (last visited Dec. 1, 2011) (an online publication system for open source projects).

⁶⁹ SOURCEFORGE, *supra* note 68.

⁷⁰ See *supra* notes 61–62 and accompanying text (providing a discussion of work for hire).

contractor models used in the games industry in particular.⁷¹ The reality, however, is the existing works for hire provisions have some notable limitations in the practical development environment at present, and while these can by and large be contracted around, it seems more practical to revise the work for hire policy such these limitations are no longer issues.

The work for hire provision of the Copyright Act of 1976 states:

A "work made for hire" is—(1) a work prepared by an employee within the scope of his or her employment; or (2) a work specially ordered or commissioned for use as a contribution to a collective work, as a part of a motion picture or other audiovisual work, as a translation, as a supplementary work, as a compilation, as an instructional text, as a test, as answer material for a test, or as an atlas, if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.⁷²

This was further defined in *Community for Creative Non-Violence v. Reid*,⁷³ creating a multi-part test for whether a creator is an employee or independent contractor. While every situation is likely factually unique, casual observation of the games industry in particular shows a number of ways this multi-part test is appropriate and a number of areas in which substantial improvement is needed specifically as the works for hire concept as it applies to game development. For example, given that most contractors (who are not employees) operate under written agreements specifying a work made for hire relationship, and given that these creations are generally part of an audiovisual work, the work for hire provision applies to the games, provided that the work is being specially ordered or commissioned. While the courts have been more expansive in their application to start-ups in particular, these practices do occur in both new and established developers.⁷⁴

The shortcoming comes in two respects: non-game assets and assets that are never used in a final audiovisual work. Non-game assets, like character art, alternate logos, and other elements, could be excluded from the work for hire considerations, leaving them in the licensed realm. These properties, if not integrated into the final audiovisual work, may simply not be covered by the

⁷¹ See *Quality of Life*, INT'L GAME DEVELOPERS ASS'N, <http://www.igda.org/quality-life> (last visited Dec. 1, 2011).

⁷² 17 U.S.C. § 101 (2006).

⁷³ *Comty. for Creative Non-Violence v. Reid*, 490 U.S. 730 (1989).

⁷⁴ Elaine D. Ziff, *The 'Work for Hire' Doctrine and Start-Up Technology Companies*, BUS. L. TODAY (Apr. 12, 2011), <http://apps.americanbar.org/buslaw/blt/content/2011/04/keepingcurrent-ip.shtml>.

existing statute, rather relying on contractual remedies than a more clear default position that could be established by an improved work for hire rule. Similarly, something that is commissioned for a game but never used, either because the game remains incomplete or because it was left on the cutting room floor, are treated as the author's work.⁷⁵ While there are certainly policy reasons for this,⁷⁶ there are competing policy interests in making the works "work for hire" regardless. Say, for example, a character is created and cut from a game. The contractor was still paid for the work, but it was never part of an audiovisual work. The developer, in making the decision to cut the character, already has plans to use the character in another title. At the theoretical level, at least, the developer is not entitled to use that asset without re-licensing it from the creator. And further, at the theoretical level, because the character model is already complete, it is no longer being commissioned and therefore potentially not eligible for work for hire treatment in the subsequent title. This may seem trivial, but the work for hire rule is the only clear way to defeat the so-called "35 year recapture" rule.⁷⁷ The rule⁷⁸ provides for a statutory way for a creator to reclaim rights to a work, *carte blanche*, from a license after 35 years. This issue will not present until 2013 when the first works covered by the statute reach 35 years of age, and jurisprudence may otherwise resolve this potential problem, but it illustrates why a clear cut division of works made for hire is critical, given the narrow, and in many ways outdated, lines drawn by the work for hire statute. Policy arguments aside, simplification of this system to match the more contractor-centric media market⁷⁹ that exists today would greatly simplify these considerations and potentially lessen the opportunity for ownership disputes.

⁷⁵ These instances don't satisfy the work for hire requirements outlined previously.

⁷⁶ From a policy perspective, it would tie the creator's hands if those elements were not legally still their property. Otherwise, those who control works for hire would have the ability to include substantial unused assets in their asserted ownership, even though they don't appear in the work. It is difficult to justify granting any claim of ownership to an element not included in the registered work, and it would be extremely difficult to police.

⁷⁷ Jay Cooper: *35 Year Copyright Reversion Clause, Works for Hire, and the Future of the Music Business*, ARTISTSHOUSE MUSIC (Nov. 2007), <http://www.artistshousemusic.org/videos/35+year+copyright+reversion+clause+works+for+hire+and+the+future+of+the+music+business> (video interview of Attorney Jay Cooper explaining what the 35-year reversion clause is, and what is likely to happen when the clause falls due in 2013); *see also Reclaiming Your Copyright After Thirty-Five Years*, DearAuthor.com (Oct. 18, 2009), <http://dearauthor.com/features/reclaiming-your-copyright-after-thirty-five-years>.

⁷⁸ 17 U.S.C. § 203(a) (2006).

⁷⁹ The media industry, in particular the games industry, has shifted to a substantially greater use of independent contractors in recent years.

VI. PROBLEMS FOR THE DEVELOPER

The issues inherent in the application of copyright to software works place the developer in a difficult position. The developer must confront issues both on the front and back end of production. As discussed above, because developers must be adequately incented to create to properly effectuate the policy justifications of the copyright system, confronting these production issues may act counter to the goals of the copyright system because they may act as a disincentive to create. While the two points discussed here are hardly comprehensive of problems the developer faces, they do represent the two areas with some of the greatest potential for meaningful improvement.

A. Problems in Production

Those who wish to create encounter their own issues. While it is beyond the scope of this article to enumerate all of these issues, a few issues that are discussed are ones where the intellectual property concerns are particularly relevant. The games industry in particular has been plagued by permissions issues relating to placement of objects “in-game.” Much like the movie industry and film industry, the game industry has the issue of product placement⁸⁰ but in a different manner. The products being placed are all rendered objects, and libraries of objects have become common subscription systems online.⁸¹ The difficulty this presents is the licensing related to those objects. For example, a rendering of a Coke bottle may require permission from both the artist and Coke, since the render contains registered trademarks, both the Coke logo as well as the bottle’s shape itself. There have been some arguments related to where and how these permissions may cross paths with fair use,⁸² but even using the most reputable service there is always a lingering question—whether the “in-game” model used is authorized by the holder of the intellectual property interest that forms the basis of the model.⁸³

⁸⁰ See Katherine Neer, *How Product Placement Works*, HOWSTUFFWORKS, <http://money.howstuffworks.com/product-placement.htm> (last visited Dec. 1, 2011); *The Greatest Movie Ever Sold*, IMDB <http://www.imdb.com/title/tt1743720> (last visited Dec. 1, 2011) (providing a more in-depth and humorous take).

⁸¹ See, e.g., TURBOSQUID, <http://turbosquid.com> (last visited Dec. 1, 2011).

⁸² Many game developers argue that their creation of real life objects in the game is a fair use similar to news reporting, parody, or criticism and commentary, depending on the actual use in the game.

⁸³ Like so many parts of the Internet, questions of whether a creator has a license from a trademark holder are often suspicious at best. See John MacNeil, *First They came for the Fords, and I did Nothing*, JOHN MACNEILL ILLUSTRATION & 3D MODELING, http://www.johnmacneill.com/WWII_Bomber.html (last updated May 21, 2008); Mark Frauenfelder, *WWII Bomber: “Trademark Infringement”*, BOINGBOING,

There is a similar issue with orphan works. The problem of orphan works has been a long standing issue in the copyright realm.⁸⁴ Orphaned code, often called abandonware, may be wholly appropriate for a small part of a larger software project, be that a website, a utility, or a game.⁸⁵ The copyright in that source code, however, would require the code's creator to grant permission for use. Given the anonymity and fluidity of the Internet, the author of a particular piece of code may be nearly impossible or impractical to locate.

While some potential solutions to this may come from legislation on orphan works or alternatively the open source solutions discussed earlier in this piece,⁸⁶ the practical answer is that the industry is waiting for an innovator to come up with a licensing solution that serves developers: a clearing house of sorts that manages and resolves licensing of assets beginning to end. The issue presented by rendered models of branded items could also be resolved as an extension of the Trademark and Copyright Offices; a kind of joint effort resolving both the trademark issues and copyright issues that exist with a rendered version of a branded product, whether that is a can of Coke, an iPhone, or a BMW M3 coupe. It would seem that the nimbleness of the private sector may make for a better solution,⁸⁷ but one could be crafted if the Trademark Office and Copyright Office systems could be integrated for this particular issue.

B. Developers' Problems with Consumers

The developer also has an issue with many of those who consume their very product. While "piracy" is often thrown out as a simple scapegoat for many industry ills,⁸⁸ it is often the enforcement of rights rather than the piracy itself that presents the greater issue. To be specific, enforcement has two areas of obvious shortcoming: technological measures and reasonable legal enforcement mechanisms.

<http://boingboing.net/2008/03/21/wwii-bomber-trademar.html> (last visited Dec. 1, 2011) (providing an alternative opinion on the need for trademark permission).

⁸⁴ Marybeth Peters, *The Importance of Orphan Works Legislation*, UNITED STATES COPYRIGHT OFF. (Sept. 25, 2008), <http://www.copyright.gov/orphan>.

⁸⁵ This depends substantially on the code in question. See, e.g., THE QUAKEFORGE PROJECT, <http://www.quakeforge.net> (last visited Dec. 1, 2011) (detailing id Software's notable release of some of their older engines as open source projects for this reason, though various licensing restrictions did still apply to some degree).

⁸⁶ See *supra* notes 36–50 and accompanying text.

⁸⁷ See *supra* note 59.

⁸⁸ See, e.g., Kristin Kalning, *Game Piracy Runs Rampant on the Internet*, MSNBC.COM (May 14, 2007, 10:24 PM), http://www.msnbc.msn.com/id/18665162/ns/technology_and_science-games/t/game-piracy-runs-rampant-internet/#.To_RC7LqJBk; Nick Pantazis, *Analyzing Piracy: The Industry's Scapegoat*, VGCHARTZ (Feb. 23, 2011), <http://gamrfeed.vgchartz.com/story/84200/piracy-the-industrys-scapegoat>.

It would seem that the best solution to technology is often more technology, but in the case of digital rights management (“DRM”) that solution has often proven to be a colossal failure. Whether that failure is one in practice⁸⁹ or one in public perception,⁹⁰ it has been rare for DRM to see much success. In fact, DRM has been the source of substantial public outcry on many occasions and has even drawn the attention of the Federal Trade Commission (“FTC”).⁹¹ Moreover, even when DRM is not falling victim to the aforementioned ire, its practical level of security is short lived as anything can be hacked or cracked given enough time and effort.⁹² Even if a perfect DRM could be found, the potential for regulatory intervention may make use of these measures more burdensome.

The irony is that while the technological solution to unlawful use of copyrighted material has issues, the legal enforcement is equally problematic. For example, while we have seen some substantial progress in improving speed, efficiency, and cost with respect to domain name disputes,⁹³ we have seen no real change from the traditional infringement suit. In fact, when these suits have been successful, the results are often such that they draw substantial ire from the public at large for their results.⁹⁴ Moreover, proposed alternative legislative remedies to

⁸⁹ See *Sony BMG Litigation Info*, ELECTRONIC FRONTIER FOUND., <https://www.eff.org/cases/sony-bmg-litigation-info> (last visited Dec. 1, 2011).

⁹⁰ See, e.g., Steven Mostyn, *Dragon Age II Mired in Accusations of DRM Restrictions*, THE TECH HERALD (Mar. 25, 2011, 12:24 PM), <http://www.thetechherald.com/article.php/201112/6972/Dragon-Age-II-mired-in-accusations-of-DRM-restrictions>.

⁹¹ *Digital Rights Management*, FED. TRADE COMMISSION, <http://www.ftc.gov/bcp/workshops/drm/index.shtml> (last visited Dec. 1, 2011).

⁹² See, e.g., Nate Anderson, *Hacking Digital Rights Management*, ARS TECHNICA, <http://arstechnica.com/apple/news/2006/07/drmhacks.ars> (last updated June 2, 2011) (a discussion of breaking DRM).

⁹³ See *Uniform Domain-Name Dispute-Resolution Policy*, INTERNET CORP. FOR ASSIGNED NAMES & NUMBERS, <http://www.icann.org/en/udrp/udrp.htm> (last visited Dec. 1, 2011).

⁹⁴ See, e.g., *Sony BMG Music Entm’t v. Tenenbaum*, 660 F.3d 487, 100 U.S.P.Q.2d 1161 (1st Cir. 2011); *Capitol Records, Inc. v. Thomas-Rasset*, 799 F. Supp. 2d 999, 100 U.S.P.Q.2d 1183 (D. Minn. 2011); Drew Wilson, *RIAA v. Tenenbaum - How Likely Is An Appeal Coming?*, ZEROPAID (July 14, 2010), <http://www.zeropaid.com/news/89915/riaa-v-tenenbaum-how-likely-is-an-appeal-coming> (providing discussion of *RIAA v. Tenenbaum*); *Capitol v. Thomas*, ELECTRONIC FRONTIER FOUND., <https://www.eff.org/cases/capitol-v-thomas> (last visited Dec. 1, 2011).

protecting copyrighted material have drawn similar ire⁹⁵ and may prove equally unworkable.⁹⁶

While legal improvements to management of DRM do nothing to substantially change the situation—especially given the inability to create true security—a change to the enforcement mechanism might have a more practical effect. What we need, in essence, is the digital equivalent of a speeding ticket for certain kinds of file sharing. While it is the noble position of many that the free flow of information should be preserved⁹⁷ even at the potential expense of protecting creator's rights, the reality is that our intellectual property system is there to set a balance between competing interests.

If a user illegally downloads ten songs from the internet, statutory damages at any level seem excessive, whether \$750 per download, \$30,000 per download, or \$150,000 per download.⁹⁸ While the downloader has certainly harmed the copyright holder, the cost of purchasing those songs on iTunes⁹⁹ or a similar market is likely around \$10. Contrast that with the statutory damage range of \$7,500 to \$1,500,000. Furthermore, those numbers exclude the costs of the litigation to enforce those penalties. A more efficient approach is bound to exist; one that balances the rights of producers and consumers more appropriately.

Imagine, in contrast, an arbitration system whereby a more reasonable penalty could be assessed on piracy below some threshold. Rather than astronomical damages, a per file fine of, for example, \$50 is assessed. Those fines accumulate in a pool which can then be distributed with some regularity to content producers who choose to waive their litigation rights in exchange for participating in this system. While there are clearly substantial details to be worked out in creating such a system, it may solve the producer's problem in enforcement in that it creates both a reasonable deterrent to the behavior but also has the potential to offset the losses in a real manner. If the fine system becomes commonplace, rather than the current astronomically low probability for an individual consumer of a massive lawsuit, consumers would be faced with the decision to weigh the cost and risk of their actions, and many would simply find it easier to buy the music through a legitimate channel, given the generally low costs associated with

⁹⁵ See, e.g., *Internet Blacklist Registration*, ELECTRONIC FRONTIER FOUND., <https://www.eff.org/issues/coica-internet-censorship-and-copyright-bill> (last visited Feb. 12, 2012).

⁹⁶ See, e.g., Joel Hruska, *How SOPA Could Actually Break the Internet*, EXTREMETECH (Dec. 19, 2011, 10:02 AM), <http://www.extremetech.com/computing/109533-how-sopa-could-actually-break-the-internet>.

⁹⁷ See, e.g., ELECTRONIC FRONTIER FOUND., <https://www.eff.org> (last visited Dec. 1, 2011).

⁹⁸ 17 U.S.C. § 504 (2006) (presenting statutory damages).

⁹⁹ iTUNES, <http://www.apple.com/itunes> (last visited Dec. 1, 2011).

digital music content available today. This is just one potential theoretical solution, and one that more closely fits with the idea of punishing those who violate rights.¹⁰⁰

VII. PROBLEMS FOR THE CONSUMER

The idea behind “consumer protection” seems to pose the question: is the current marketplace too complex for the average consumer?¹⁰¹ That is, does our legal regime as it relates to software have too many potential pitfalls making protecting the average consumer an impossible task? It is an impossible question to answer, and one that many people have spent substantial time and effort chasing. The complexity of the modern world with its End User License Agreements and Privacy Policies is substantially more complex than just a few decades ago.¹⁰² It is not only the introduction of technology that has increased the complexity. An equal share has come from the business models and legal interpretations that have accompanied software in particular.¹⁰³ Most lay people have some difficulty understanding the purchase versus license model, especially as it applies to computer software, and this has become readily apparent in practice even to the point of being satirized by popular television shows.¹⁰⁴

¹⁰⁰ See, e.g., Copyright Act, R.S.C. 1985, c. C-42. See also *Canadian Copyright Levy on Blank Audio Recording Media - or - The “Blank CD-R Tax” FAQ*, NEIL.ETON.CO, <http://neil.eton.ca/copylevy.shtml> (last updated Dec. 15, 2003), for an alternative concept on raising funds to compensate those potentially impacted by piracy. While Canada’s law does not address file sharing in particular, a similar surcharge on recordable media and storage media could be imposed to compensate potential piracy victims in exchange for waiver of litigating rights below some threshold. *Id.* Other countries have imposed similar taxes, and even the United States has a comparatively small levy in this regard for music. See Audio Home Recording Act, 17 U.S.C. §§ 1001–10 (2006). Whether this could be adapted to software remains to be seen. See *Private Copying Levies*, EUROPEAN COMMISSION, http://ec.europa.eu/internal_market/copyright/levy_reform/index_en.htm (last visited Feb. 17, 2012), for additional international information on private copying levies.

¹⁰¹ While the more common definition may be to promote marketplace openness and truthful business, the reality is often marketplace complexity. Franchising regulations are an ideal example in this regard. See, e.g., *Franchise and Business Opportunities*, FED. TRADE COMMISSION, <http://ftc.gov/bcp/menus/consumer/invest/business.shtm> (last visited Dec. 1, 2011).

¹⁰² See Mike Masnick, *Proof That (Almost) No One Reads End User License Agreements*, TECHDIRT (Feb. 23, 2005, 5:46PM), <http://www.techdirt.com/articles/20050223/1745244.shtml> (describing stories that demonstrate that few, if any, take the time to read these agreements).

¹⁰³ Software as a service and cloud computing have been the most recent changes that cause difficulty for the average consumer. The issue largely centers on the idea of license versus ownership in software. See, e.g., *SaaS vs. Licensed vs. Custom Software*, INNOVATIONSIMPLE (June 7, 2011), <http://innovationsimple.com/web-development/saas-vs-licensed-vs-custom-software>.

¹⁰⁴ See, e.g., *South Park: HUMANCENTiPAD* (originally aired on Apr. 27, 2011), available at <http://www.southparkstudios.com/full-episodes/s15e01-humancentipad>.

A world that is already complex has become even more so, blurring the lines of ownership with decisions like *Autodesk*¹⁰⁵ and the dramatic increase in cloud computing and software-as-a-service models. While it is beyond the scope of the article to dissect the *Autodesk* decision, *Autodesk* thoroughly limited the first sale doctrine as it applies to software. First sale is the legal concept by which the copyright holder can only regulate the first sale of the copyrighted material to the public and subsequent resale of that original item could not be stopped.¹⁰⁶ In short, even the very concept of first sale,¹⁰⁷ which most consumers implicitly understand even if they do not know by name, does not exist in the same manner it once did. In fact, extrapolated to the full potential ramifications of the *Autodesk* decision, resale of software as a whole may be questionable with a few minor changes to the system.¹⁰⁸ While there have been longstanding rumors of intervention by the FTC on these kinds of issues,¹⁰⁹ no concrete answers have yet emerged.

Of course, the answer here may be a bifurcation that some software developers will likely oppose. The simplest answer would seem to be to divide software into that which is sold at retail and that which is digitally distributed. Retail software would return to being fully covered by the first sale doctrine. Put simply, if you sell it on an install disk, the person purchasing that disk should be able to resell it, provided they are reselling the original and not keeping an illegal copy. Digitally distributed software, on the other hand, can be managed through the service that provides it, whether as a service or in a more traditional sales arrangement. It would seem the FTC may be more likely to weigh in on traditional purchases through digital distributions, at least requiring the seller to specify a period of time for re-downloads and the like.

Looking forward, a future issue may be the ownership of data once it is placed into the cloud¹¹⁰ and, conversely, the ability to remove that data from the cloud or protect any intellectual property rights you may have in it. Some sort of utopian

¹⁰⁵ *Vernor v. Autodesk, Inc.*, 621 F.3d 1102 (9th Cir. 2010).

¹⁰⁶ See, e.g., U.S. DEPT OF JUSTICE, UNITED STATES ATTORNEYS' MANUAL, tit. 9, ch. 9-71.001, at 1845 available at http://www.justice.gov/usao/eousa/foia_reading_room/usam/title9/crm01854.htm.

¹⁰⁷ See, e.g., 17 U.S.C. § 109 (2006); *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339 (1908); *SoftMan Products Co. v. Adobe Sys.*, 171 F. Supp. 2d 1075 (C.D. Cal. 2001).

¹⁰⁸ See, e.g., Mark Methenitis, *LGI: Are Game Resales at Risk?*, JOYSTIQ (Sept. 15, 2010, 10:00 PM), <http://www.joystiq.com/2010/09/15/lgi-are-game-resales-at-risk>.

¹⁰⁹ See, e.g., Mark Methenitis, *LGI: FTC Could Target EULAs*, JOYSTIQ (Jan. 30, 2009, 11:00 PM), <http://www.joystiq.com/2009/01/30/lgi-ftc-could-target-eulas>.

¹¹⁰ See Eric Knorr & Galen Gruman, *What Cloud Computing Really Means*, INFOWORLD, <http://www.infoworld.com/d/cloud-computing/what-cloud-computing-really-means-031> (last visited Dec. 1, 2011).

fantasy where rights protection is foolproof is unlikely to occur, since rights management is hardly infallible at the local level, much less when that content is released into the wilds of the internet. Because of the rate of development, the private sector may be better equipped to create threshold expectations for cloud usage, which might be borrowed for a simple regulatory framework. Specifically, industry can generally move more quickly in creating expectations and boundaries than the legislature can, and since cloud computing itself is still an evolving issue, industry could likely respond to new issues before a bill could even be presented. It seems like this may be an area where the best regulation is simply a floor, rather than a ceiling. The floor would at least provide a minimum expectation and protection for consumers for industry to build upon.

VIII. CONCLUSION

The digital era has changed everything. Even the issues listed here hardly scratch the surface of the potential issues presented in the digital economy. But it has become apparent that there are ways that the legal system, especially as it relates to intellectual property, can be better optimized for the realities of the world that exists in the beginning of the 21st century. Simply put, we have been putting Band-Aids on decades old intellectual property systems through jurisprudence¹¹¹ and legislative inaction to help them cope with technology the laws' creators could never have anticipated.¹¹² While there is much to be said for legal institutions that have withstood the test of time, the reality is that some practical legal realms need to be updated for the world in which we live. Intellectual property, despite coping with change reasonably well, would be a far more efficient area of law if overhauled at a deeper level. Given that the area of the law is so deeply tied to technology which prides itself on change, it should be accompanied by an equally agile legal system. Intellectual property law could take a cue from one of the great creators of intellectual property, the late Walt Disney, who once said, "We keep moving forward—opening up new doors and doing new things—because we are curious. And curiosity keeps leading us down

¹¹¹ The cases cited in this piece represent just a fraction of the small nudges to intellectual property based on the current digital reality, and a thorough review of those cases would be the subject for a substantially longer article. See, e.g., *The Impact of the Internet on Intellectual Property Law*, WORLD INTEL. PROP. ORG. (Dec. 2002), http://www.wipo.int/copyright/en/ecommerce/ip_survey/chap3.html.

¹¹² As of the writing of this piece, the proposed Protect IP Act of 2011 is another attempt to force the current system to continue without improvement as to these issues. See Larry Downes, *Leahy's Protect IP Act: Why Internet Content Wars Will Never End*, FORBES (May 16, 2011, 2:29 AM), <http://www.forbes.com/sites/larrydownes/2011/05/16/leahys-protect-ip-act-why-internet-content-wars-will-never-end>.

new paths. We are always exploring and experimenting.”¹¹³ It is time that intellectual property law learns to efficiently address those new advances, so that other great minds can keep exploring and experimenting. It is impossible to hope to create a system that will anticipate the technology of ten, fifty, or one hundred years from now, but it does not seem to be asking much for a system that is at least modernized to catch up to today. While the proposals contained in this piece may be far from perfect, they do at least take that first crucial leap into proposing real changes that could improve our current intellectual property reality for all those involved, producers and consumer alike, rather than continuing to let the problems stagnate.

¹¹³ See *Creative Engineers – Words to Live By*, VICTOR SOLANOY (July 5, 2010, 11:45 PM), <http://www.victorsolanoy.com/tag/walt-disney>.